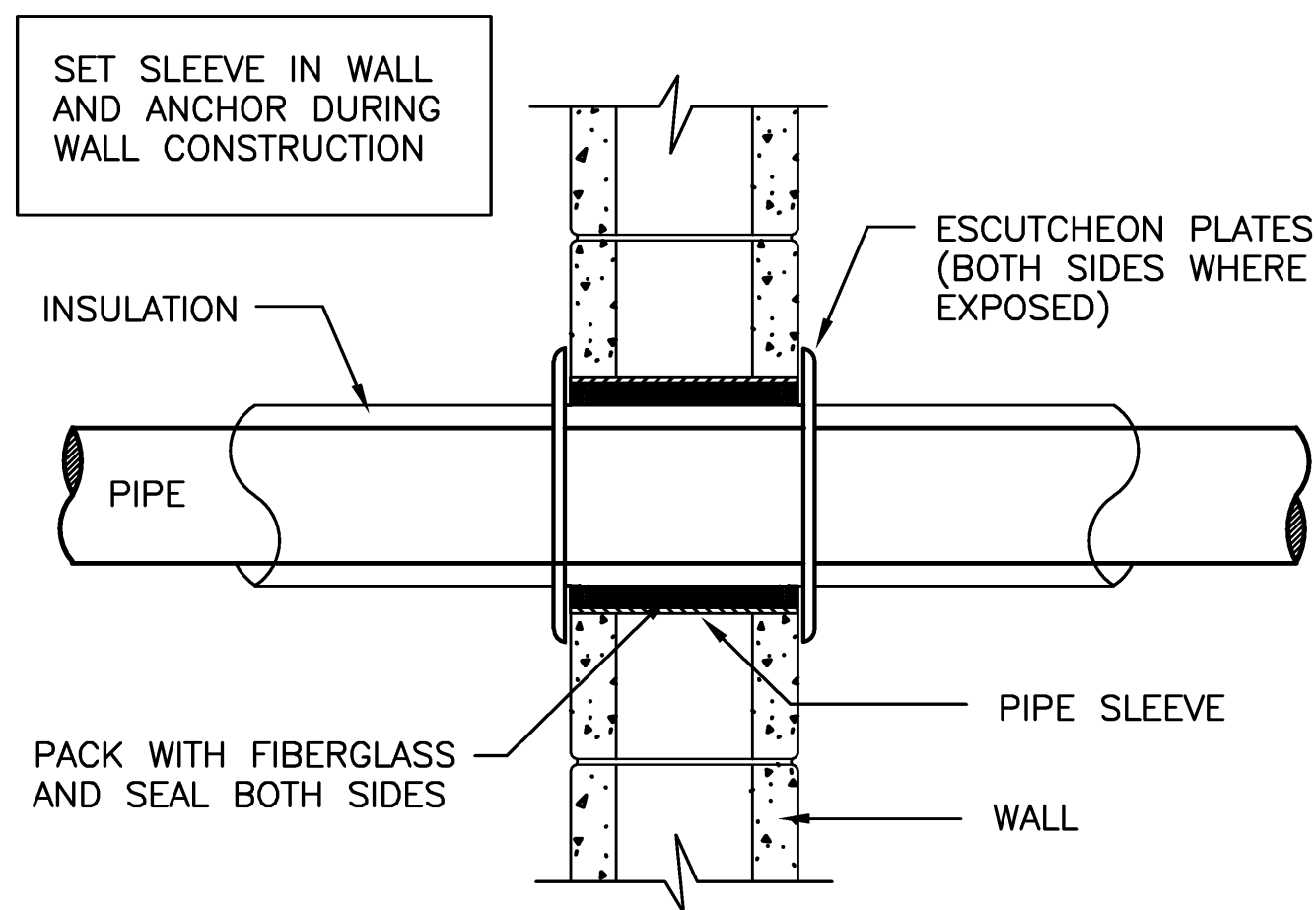


MAX. DUCT DIMENSION	BRACING ANGLES		ANGLE CLIP	CONC. ANCHOR OR INSERT
	VERTICAL	ALL OTHERS		
UP TO 60"	4x4x12GA	3x3x16GA	3x3x 1/4	1/2"
84"	4x4x 1/4"	4x4x12GA	4x4x 1/2	5/8"
96"	5x3x 1/4"	4x4x12GA	4x4x 1/2	5/8"

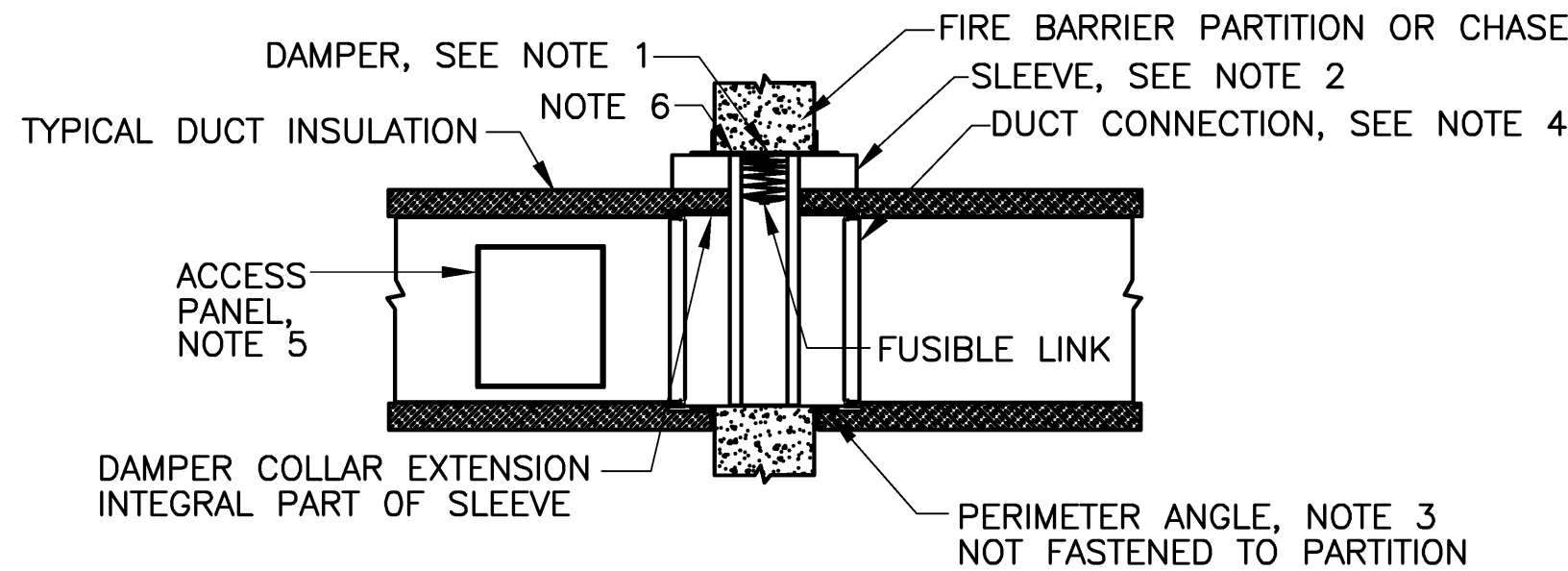
# 1 TYPICAL SEISMIC BRACING FOR RECTANGULAR DUCT NOT TO SCALE

- REFER TO 2003 INTERNATIONAL BUILDING CODE.
- SEISMIC RESTRAINTS SHALL NOT BE REQUIRED FOR THE FOLLOWING INSTALLATIONS:
  - PIPING IN MECHANICAL ROOMS (EXCEPT GAS PIPING) LESS THAN 1-1/4 INCH INSIDE DIAMETER
  - ALL OTHER PIPING (EXCEPT GAS PIPING) LESS THAN 2-1/2 INCH INSIDE DIAMETER.
  - ALL RECTANGULAR AIR-HANDLING DUCTS LESS THAN 6 SQ. FT. IN CROSS-SECTIONAL AREA.
  - ALL ROUND AIR-HANDLING DUCTS LESS THAN 28 INCHES IN DIAMETER.
  - ALL PIPING SUSPENDED BY INDIVIDUAL HANGERS 12 INCHES OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE SUPPORT FOR THE HANGER.
  - ALL DUCTS SUSPENDED BY HANGERS 12 INCHES OR LESS IN LENGTH FROM THE TOP OF THE DUCT TO THE BOTTOM OF THE SUPPORT FOR THE HANGER.

# 3 GENERAL NOTES - SEISMIC BRACING NOT TO SCALE

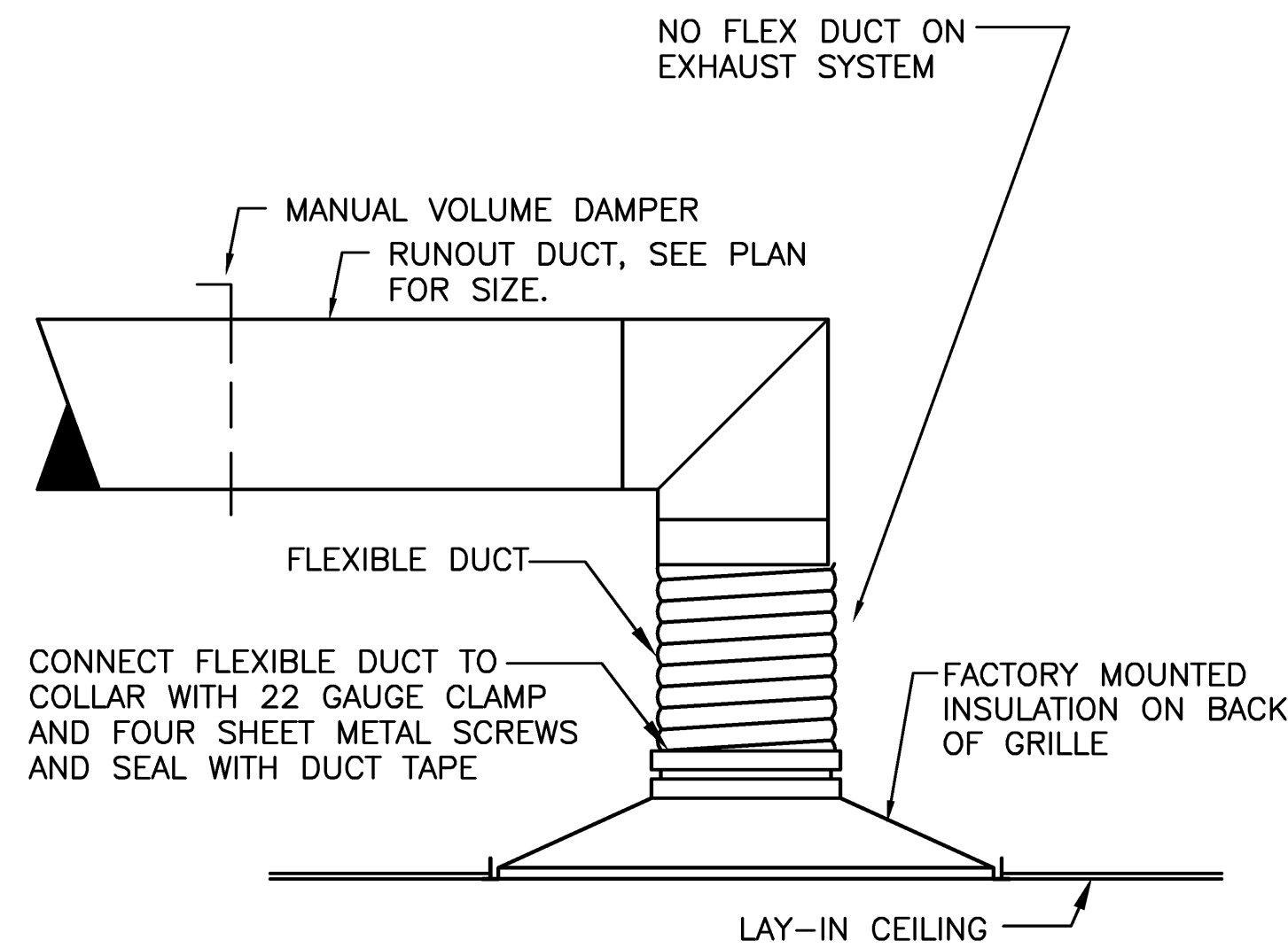


# 4 NON-RATED PIPE PENETRATION - INTERIOR WALL NOT TO SCALE

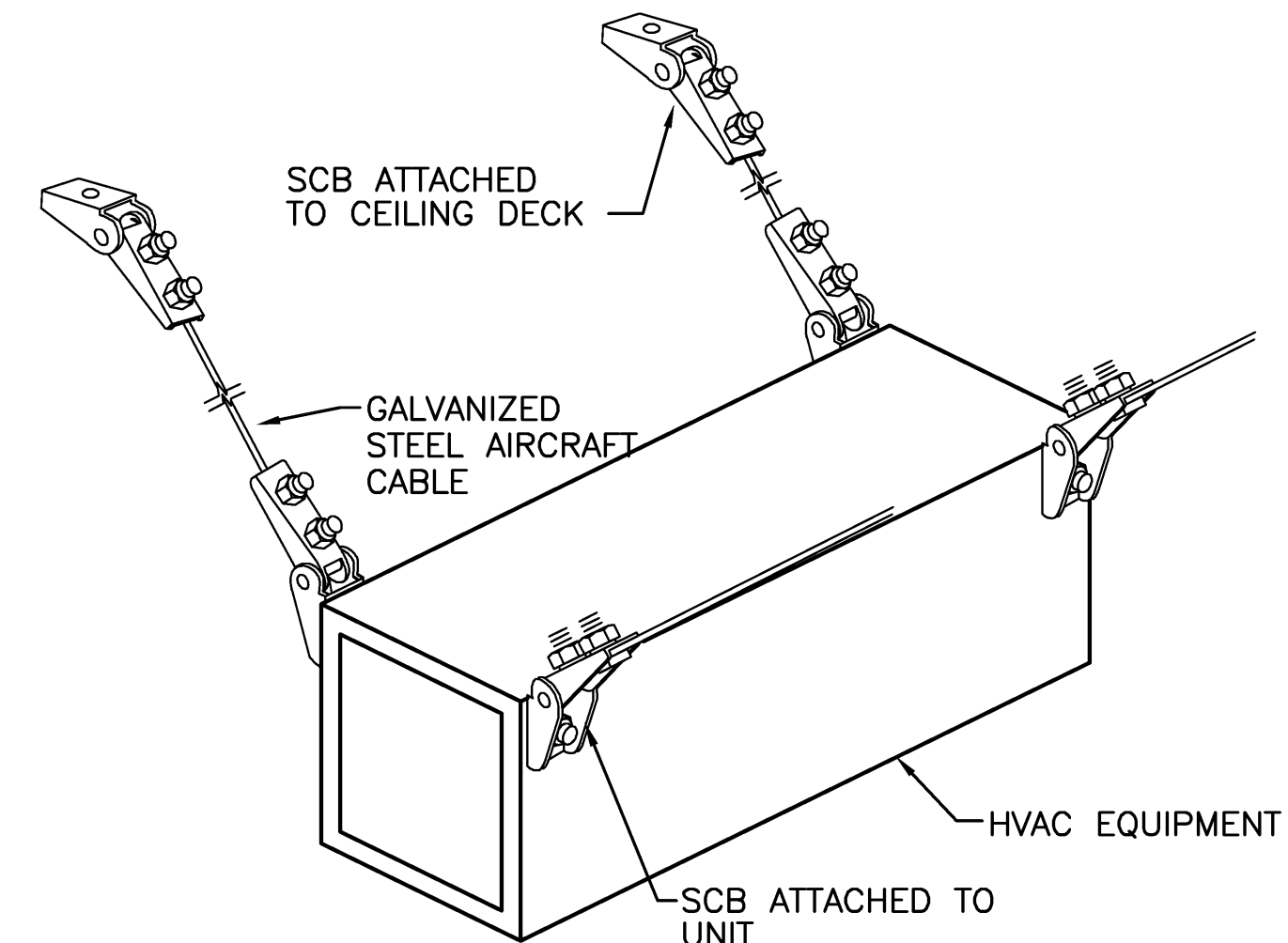


- NOTES:
- A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND PERIMETER ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR, NOT OUTSIDE THE PENETRATION.
  - GALVANIZED STEEL: NOT LESS THAN THE CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
  - PERIMETER ANGLES: GALVANIZED STEEL, NOT LESS THAN 1-1/2" x 1-1/2", 14 GAGE, TO PROVIDE 1" MINIMUM OVERLAP OF OPENING ON ALL FOUR SIDES.
  - BREAKAWAY DUCT CONNECTION: CONTRACTORS' OPTION OF TYPES SHOWN IN SMACNA LPDS, FIG. 2-13. SEAL JOINTS.
  - ACCESS PANELS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK(S)
  - PROVIDE 1/4" TO 1/32" CLEARANCE ON HEIGHT AND WIDTH. FILL ANNULAR SPACE WITH ROCK WOOL FIRESTOP FIBER.
  - ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THROUGH ATTIC FLOORS AND MECHANICAL ROOM FLOORS, SHALL BE PROVIDED WITH A 3" HIGH CONCRETE CURB AROUND OPENING FOR DUCT.
  - PROVIDE FIRE DAMPER IN EXHAUST DUCT SUITABLE FOR EXHAUST CORROSIVE ENVIRONMENT WITH COATED FUSIBLE LINK.

# 5 FIRE DAMPER DETAIL NOT TO SCALE



# 2 TYPICAL DIFFUSER CONNECTION DETAIL NOT TO SCALE



# 6 SEISMIC BRACING - MECHANICAL EQUIPMENT NOT TO SCALE